2/1/1996

Application for Change of Conditions

Introduction

Fine Line Paint
12234 Los Nietos Road

This Application for Change of Conditions to the Exis Mixing Vessel ("Application") has been completed at t Line Paint Corporation ("Fine Line Paint"), South Coast facility identification number 009781, located at 12234 Los Nietos Road in Santa Fe Springs, California ("site"). This application has been completed in order to change conditions contained on the existing permit to operate (permit to operate D04084) so that the mixing vessel can be utilized for the mixing of various industrial, solvent-reduceable paints. Fine Line has ceased the use of 1,1,1 - trichloroethane to formulate paints produced in the mixing vessel.

Currently, Fine Line Paint employs 40 people. Fine Line typically operates 10 hours per day, 7 days per week, 52 weeks per year; however, during times of peak production Fine Line may operate 24 hours per day, 7 days per week, 52 weeks per year.

Process Description

Fine Line Paint will produce a variety of industrial coatings in the mixing vessel including enamels, sealers and vinyl coatings. Fine Line Paint is currently utilizing an existing 350 gallon mixing vessel for the production of various product lines at the site. The mixing vessel typically processes a single 100 gallon (1,000 pounds) batch of product at a time and is utilized to process a maximum of 400 gallons of product per day. Bulk solvents stored in tanks are transferred to the mixing vessel via a pipe and manifold system. Low-volume solvents, resins and other liquid additives stored in drums are transferred to the mixing vessel via pumps and hoses. Dry additives are manually added to the mixing vessel. Material Safety Data Sheets for typical solvents, resins and additives are included as attachments.

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During the manufacturing process solid tints and related additives are combined in the mixing vessel. The material is then ground using a 50 h.p. disperser for approximately 20 minutes. Low-volume solvents, resins and other liquid additives are then added to the mixing vessel. Following further blending a sample of the material is taken and checked in the quality control laboratory to determine compliance with the given product specifications.

The lid of the mixing vessel remains closed when adding the dry additives to the mixing vessel and during mixing operations. The mixing vessel is vented to an existing baghouse (existing permit to operate number D04212) to control emissions of particulate matter.

Equipment Description

The mixing vessel operated at the site consists of the following:

- 1 - mixing vessel, Morehouse Cowles Co., model LA43, 350 gallon capacity, vented to a baghouse.
- 1 - disperser, 50 h.p.

Emission Estimations

Due to the operation of the mixing vessel the potential for the emission of criteria pollutants including reactive organic gases (ROG) and particulate matter (PM) exists. Emissions of ROG and PM are estimated as follows.

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Emission of Reactive Organic Gases (ROG)

ROG is released to the atmosphere as a result of the operation of the mixing vessel. Calculated releases of ROG to the atmosphere during the operation of the mixing vessel is based on an emission factor for controlled paint mixing found in USEPA AP-42, September 1985. The range of percent ROG loss for the controlled case presented in AP-42 is 1 to 2 weight percent of solvent used. Daily ROG emissions resulting from the operation of the mixing vessel are summarized in **Table I - Summary of ROG Emissions**.

Daily Emissions

$$D_{ROG} = \sum FQ_iV_ib \quad \text{for } i = 1 \text{ to } n$$

where,

D_{ROG} = daily emissions of ROG resulting from the operation of mixing vessel, (lbs/day).

F = emission factor, (2.0E-2 lbs/lbs).

Q_i = quantity of additive used per batch, (gal).

V_i = VOC content of additive, (lbs/gal).

b = number of batches, (4).

n = number of VOC-containing materials per batch.

Table I - Summary of ROG Emissions

Chemical	Emission Factor (lb/lb) (F)	Quantity Used Per Batch (gal) (Q_i)	VOC Content (lbs/gal) (V_i)	Emission of ROG Per Batch (lbs)
5070/6601	2.00E-2	25.0	2.378	1.189
Bykumen	2.00E-2	0.5	7.339	0.073
5184/5117	2.00E-2	45.0	3.764	3.388
Mineral spirits	2.00E-2	13.0	6.589	1.713
Nuxtra ADR-10	2.00E-2	0.13	2.602	0.007
Suspenso 70	2.00E-2	1.0	2.175	0.004
ASA	2.00E-2	0.13	7.623	0.02
Bicopuff	2.00E-2	0.5	2.81	0.028
Emission of ROG Per Batch (lbs)				6.422
Daily Emission of ROG (lbs)		(D_{ROG}) = 6.462 • 4 batches = 25.688		

Emission of Particulate Matter (PM_{10})

Emissions of particulate matter with a diameter of less than 10 microns resulting from the operation of the mixing vessel are summarized in **Table II - Summary of PM Emissions**. In order to conservatively estimate emissions of PM_{10} it is assumed that 100% of the particulate matter is emitted as PM_{10}.

Emissions of PM_{10} from the mixing vessel are vented to an existing baghouse having a 99% removal efficiency.

Daily Emissions

$$D_{PM} = \sum FQ_i(1 - R) \text{ for } i = 1 \text{ to } n$$

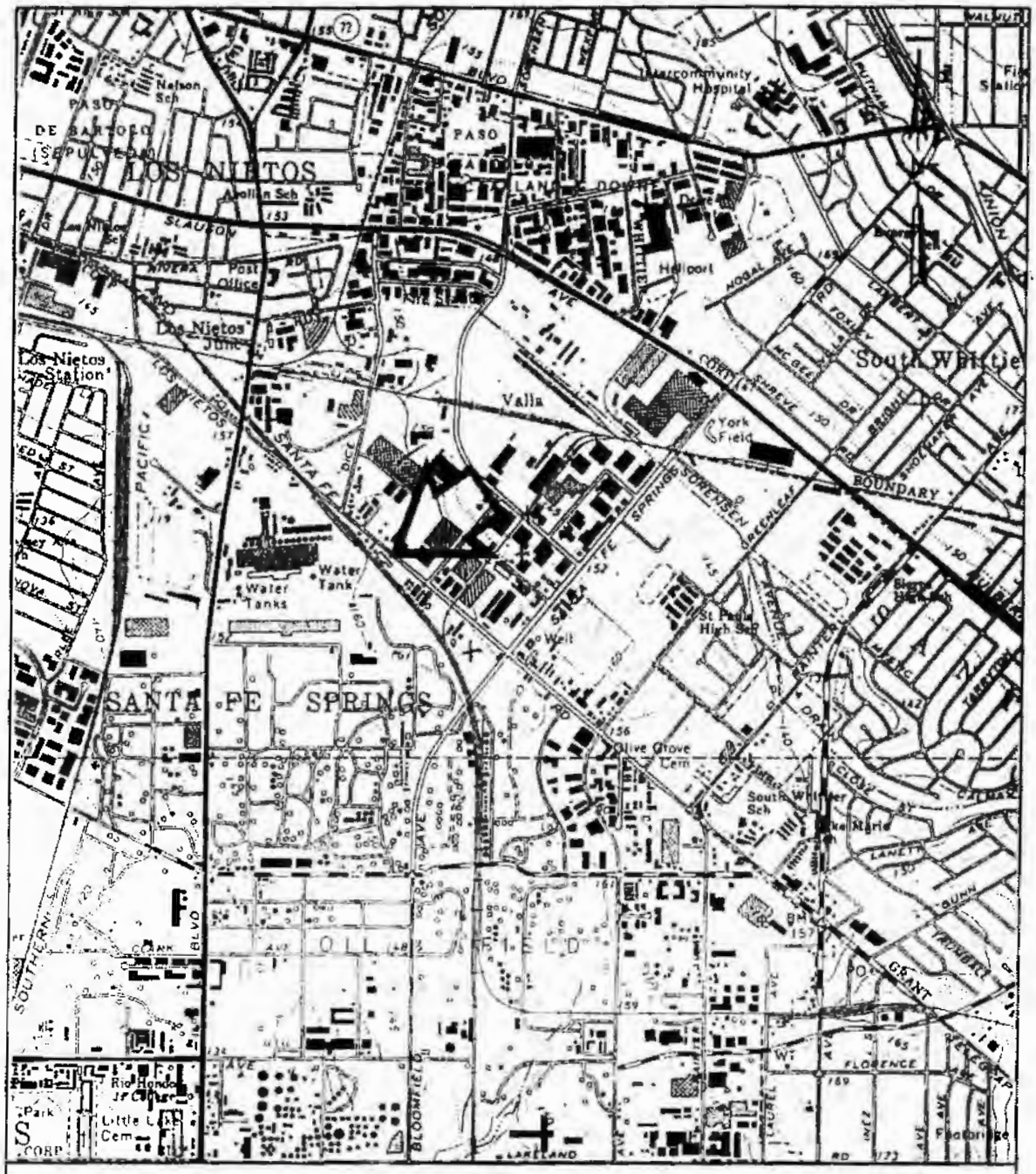
D_{PM} = daily emissions of PM_{10} from mixing vessel, (lbs/day).
F = emission factor for particulate matter during paint manufacturing, (5.0E-3 lbs/lbs; AP-42, Supplement A, Oct 1986).
Q_i = quantity of additive used per batch, (lbs).
R = proportion of PM_{10} removed by baghouse, (9.90E-1).
n = number of dry additives per batch, (2).

Table II - Summary of PM_{10} Emissions

Chemical	Emission Factor (lbs/lbs) (F)	Quantity of Additive Used (lbs) (Q_i)	Proportion of PM_{10} not Removed by the Cartridge Collector (1 - R)	Emission of PM_{10} Per Batch (lbs)
TiO2	0.005	250.0	0.01	0.013
Omyacarb UF	0.005	100.0	0.01	0.005
Emissions of PM_{10} Per Batch (lbs)				0.018
Daily Emissions of PM10 (lbs)		(D_{PM}) = 0.018 • 4 batches = 0.072		

Compliance with Regulation XIII and Best Available Control Technology

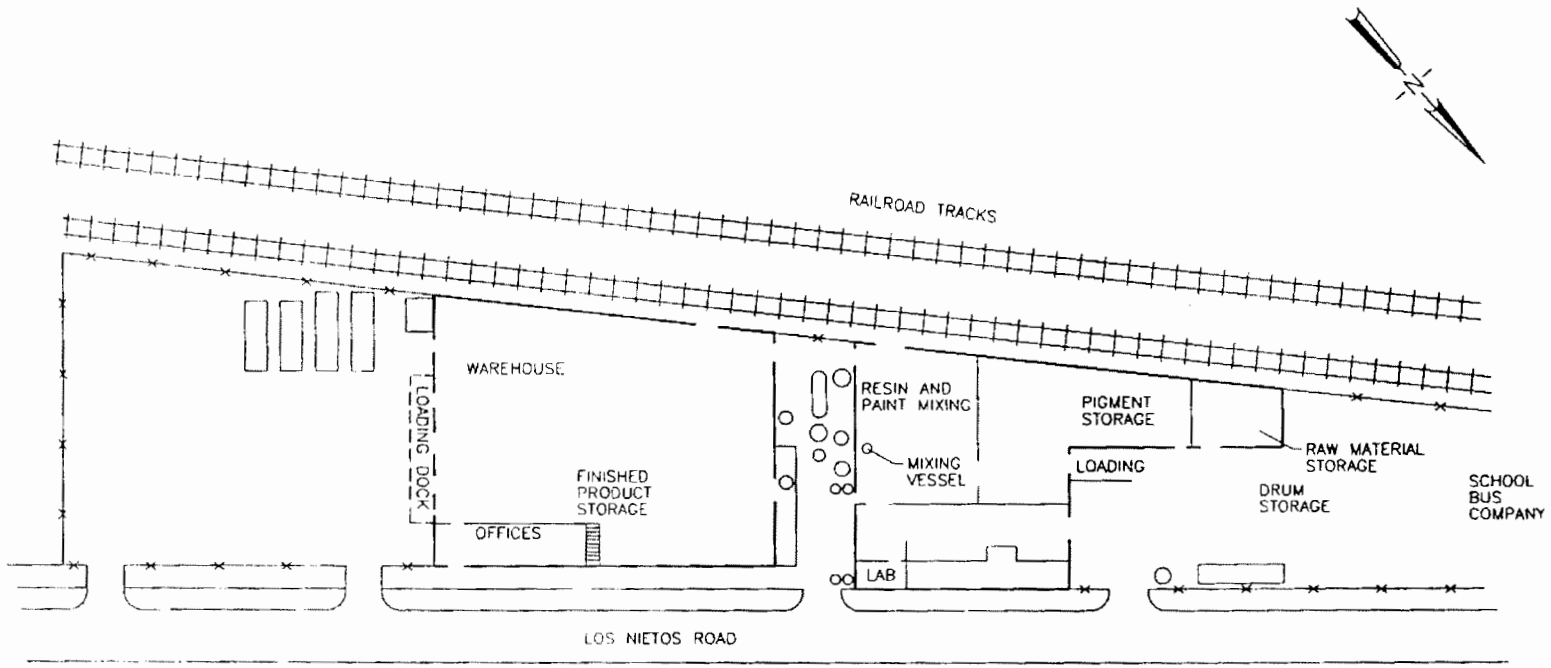
Since the operation of the mixing vessel results in a net increase in emissions of criteria pollutants, it is subject to New Source Review under the new version of Regulation XIII. The Best Available Control Technology (BACT) Manual (July 1990) establishes control strategies to limit the emission of particulate matter from mixing tanks where dry additives are used. The technologically feasible BACT guideline requires the use of a baghouse to control particulate matter emissions. Since a baghouse is used to control emissions of PM, the mixing vessel as described in this application meets the requirements.



Area Map
Scale: 1 inch = 2000 feet

Jorgensen Environmentel, Inc.

Fine Line Paint Corporation
12234 Los Nietos Road
Santa Fe Springs, California



Site Map
9 February 1996

Jorgensen Environmental, Inc.

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Santa Fe Springs, California